

Application No. 09/779,860
Amendment "C" and RCE dated October 26, 2005
Reply to Office Action mailed September 21, 2005

REMARKS

The final Office Action, mailed September 21, 2005, considered and rejected claims 1, 10, 12-15, 17 and 19-21. Claims 1, 10, 12-15, 17, 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Barton et al. (U.S. Patent No. 6,233,389) in view of Weaver et al. (U.S. Patent No. 6,112,226). Claim 21 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Barton et al. (U.S. Patent No. 6,233,389) in view of Weaver et al. (U.S. Patent No. 6,112,226), and further in view of Elliott (U.S. Patent No. 6,442,328).¹ In addition, claim 1 was rejected under 35 U.S.C. § 112, first paragraph as not being enabled by the originally filed specification.

By this paper, claims 1, 10 and 17 have been amended.² No claims have been cancelled or added, such that claims 1, 10, 12-15, 17 and 19-21 remain pending, of which claims 1, 10 and 17 are the only independent claims at issue.

Initially, it will be noted that the present invention is generally directed to a method and corresponding system adapted for use with a set-top box that receives digital programming content that is comprised of multiple channels, and wherein the programming content of each channel is provided to the set-top box in an encoded digital format determined by the provider of the content. Applicants' claimed invention is directed to a method and a corresponding system for recording one or more selected channels without decoding them prior to recording so as to store them in the same encoded digital format as determined by the content provider in order not to degrade the quality of the selected channels. In addition to not degrading the recording quality of the selected channels, Applicants' invention also advantageously permits display of one of the recorded channels while recording another one or even recording a selected channel while it is being displayed.

¹ Although the prior art status and some of the assertions made with regard to the cited art is not being challenged at this time, Applicants reserve the right to challenge the prior art status and assertions made with regard to the cited art, as well as any official notice, which was taken in the last Office Action, at any appropriate time in the future, should the need arise, such as, for example in a subsequent amendment or during prosecution of a related application. Accordingly, Applicants' decision not to respond to any particular assertions or rejections in this paper should not be construed as Applicants acquiescing to said assertions or rejections.

² Support for the claim amendment is found within the disclosure of Applicants' specification, as originally filed, including at least the disclosure found on pages 8 and 12-15.

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As claimed in claim 1 (*see also* claim 10 directed to a method and claim 17 directed to a corresponding system), the digital programming content is received at the set-top box, with the digital programming content being comprised of any or any combination of satellite transmissions, cable television transmissions, local television transmissions, radio transmissions, Internet data, video streams, or audio streams. Any such content may, whether of a single type or a combination, also be combined with MPEG video or audio. The digital programming content is encoded in the digital format that is determined by the content provider and includes at least one channel other than MPEG. The programming content is then isolated in order to select the at least one channel. As clarified by this amendment, the programming content can be isolated from any of multiple channels which are in a plurality of digital formats. Thereafter, the digital content of the at least one channel is sent to, and stored on, a storage medium at the set-top box, without decoding it, in order to store it using the same digital format with which the at least one channel is received at the set-top box, in order to store it without degrading it.

Optionally, in accordance with the claimed system and method, the digital content of a second channel which was stored prior to decoding, can be retrieved from the storage medium and the second channel can then be decoded into an analog format for display, while storing the digital content of the at least one channel on the storage medium (claims 1, 15 and 19). As a further option, a digital-to-analog converter (DAC) can be coupled to the transport demultiplexer so that the at least one selected channel can be simultaneously displayed while it is also being stored on the storage medium of the set-top box (claims 13 and 20).

Although the cited art generally deals with methods and systems for storing and playing back audio-visual content, Applicants note that the cited art fails to anticipate or make obvious the claimed invention. In particular, the cited art fails to disclose or suggest, among other things, a method or system wherein multiple channels of programming content include content encoded in a plurality of digital formats, and a transport demultiplexer which can send digital content in the plurality of digital formats. In other words, the cited art fails to disclose or suggest a method or system in which the received digital content can be stored in any of multiple digital formats received by the set-top box.

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In fact, Barton appears to disclose a TV receiver which isolates and stores content in only a single digital format. In particular, the TV receiver in Barton accepts only analog broadcasts (i.e. NTSC or PAL format) and MPEG digital broadcasts (i.e. DSS, DBS, or ATSC). (Col. 2, ln. 4-10; Col. 3, ln. 30-39). When an analog broadcast form is received, the stream is "converted to an MPEG formatted stream," while "pre-formatted MPEG streams are extracted from a digital-TV signal and presented in a similar format to [the] encoded analog streams." (Col. 2, ln. 10-14). Thereafter, the MPEG streams from both the analog and MPEG-based streams are sent to a media switch which buffers the MPEG stream into memory. In other words, Barton teaches that all digital content is in a MPEG format and that, regardless of the format of the broadcast content as selected by the content provider, the content is stored in a single (i.e. MPEG) format, and does not teach a demultiplexer that can send digital content in a plurality of digital formats to the storage medium, as claimed.

The Examiner has acknowledged that Barton does not, alone, teach or suggest the claimed invention as recited in the listed claims. (Office Action, pp 5-6). To supply the missing teachings, the Examiner relies on the teachings of Weaver. In this regard, Applicants respectfully submit that even assuming, *arguendo*, that this were true, to which Applicants do not acquiesce, the cited disclosure of Weaver does not disclose or suggest in any way a method or system wherein "multiple channels of programming content include a plurality of digital formats," or a "transport demultiplexer which can send digital content in [a] plurality of digital formats," as claimed.

Weaver appears to disclose a method and a system for encoding digital, visual content to facilitate non-sequential playback by a client device. In Weaver, a content provider encodes a video stream, and corresponding packets and layers of data, into the MPEG-2 format. (Col. 7, ln. 6-16). Thereafter, and upon request by the client, a file—and its corresponding layers and packets—are subsequently sent to the client device. (Col. 14, ln. 5-12). Accordingly, Weaver discloses sending portions of a single file, and does not disclose sending data in multiple channels, let alone channels having a plurality of data formats, as claimed.

Additionally, while Weaver primarily describes encoding data streams in MPEG-2 format for transmission, Weaver also notes that alternative digital audio-visual storage formats

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also have structures similar to MPEG-2 and may be used and encoded by the content source. In particular, Weaver discloses that MPEG-1, Quicktime, AVI, Proshare, and H.261 are alternative formats to MPEG-2 for the storage of digital audio-visual content. (Col. 7, ln. 59-62). Despite this disclosure, however, Weaver fails to teach or suggest the invention as claimed.

For example, Weaver expressly teaches that the content provider's server (rather than the client) stores the content according to the different formats to accommodate *different clients* from a wide variety of storage formats. (Col. 7, ln. 62-67). In other words, although a content provider may store content in various formats, Weaver does not disclose that more than a single format is sent to, or thereby received by, a single client, but merely suggests, similar to Barton, that a client receives a single digital format. Accordingly, Weaver can, at most, be read to suggest modifying the teachings of Barton to replace the MPEG2 format with an alternative form (i.e. MPEG-1, AVI, Quicktime, Proshare, or H.261). Accordingly, even if Weaver and Barton are combined, a TV receiver according to the combined system would receive analog signals (and convert them to one of the alternative formats), and also be capable of receiving a single, pre-formatted digital stream which would be presented to the system in only the same format as the encoded analog stream. In other words, the combined system of Barton and Weaver stores all content (analog and digital) in the same format, and does not teach a system or storage medium which can isolate multiple content formats, or which can store the received digital content, regardless of the digital format chosen by the content provider.

In fact, Barton discourages, and thereby teaches away from, such a combination. In particular Barton discloses that the single MPEG format facilitates "internal transfer and manipulation." (Abstract; Col. 2, ln. 12). More particularly, the single MPEG format allows an input section to send an MPEG stream to a low cost media switch which, thereafter, reads the MPEG stream to detect video, audio, and data events, and parses the stream according to detected events. (Col. 5, ln. 3-19; Col. 6, ln. 16-25). Accordingly, the media switch must be capable of reading and splitting-up the MPEG streams into audio, video, and data events.

According to Barton, a unique aspect of the media switch is its ability to operate inexpensively. (Col. 6, ln. 16-17). Naturally, costs are reduced by constructing a media switch that operates on only a single data format. Any increase in hardware, software, executable

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instructions, and the like within the media switch, so as to add the capability to read and parse content presented in other data formats, can add to the cost of the device, thereby defeating the unique, inexpensive data handling described by Barton. Accordingly, and for at least the foregoing reasons, a person of ordinary skill in the art would not be motivated to combine the teachings of Barton and Weaver and, therefore, Applicants respectfully submit that claim 1, should now be found allowable over the art of record.

It will also be noted that claims 10 and 17, as well as all of their dependent claims, should also be found allowable inasmuch as independent claims 10 and 17 have been amended to incorporate subject matter which corresponds with the recited elements of claim 1, and which are not taught or suggested by the art of record. Accordingly, for at least these reasons, Applicants respectfully submit that the cited art fails to anticipate or make obvious Applicants' invention, as claimed, for example, in the independent claims described above. In view of this, Applicants note for the record that the other rejections and assertions of record with respect to the independent and dependent claims are now moot, and therefore need not be addressed individually. However, in this regard, it should be appreciated that Applicant does not necessarily acquiesce to any assertions in the Office Action that are not specifically addressed above, and hereby reserve the right to challenge those assertions at any appropriate time in the future, should it arise, including any official notice.³

Additionally, Applicants note that claim 1 has been amended to clarify that the programming content can include any or any combination of the recited transmissions, data or streams combined with MPEG video or audio, but that MPEG video or audio does not, alone, make up the entirety of the digital programming content. Particularly in light of this amendment, Applicants submit that the rejection of claim 1 based on 35 U.S.C. § 112, first paragraph is overcome.

³ For example, Applicants disagree with the Examiner's assertions that Applicants have misrepresented the text of the Barton reference, and with the Examiner's assertion that the signals decoded and converted by the input section are limited to the Closed Caption (CC) and Extended Data Services (EDS). Applicants note that the reference refers to TV input streams as including both analog and digital forms, and clearly notes that "TV streams are converted to an Moving Pictures Experts Group (MPEG) formatted stream." (See, e.g. Abstract). Further, Barton does not describe CC and EDS information as "signals," but merely as components embedded within other signals. Accordingly, there is no justification to the assumption that "such signals" refers to CC and EDS, let alone exclusively to CC and EDS.

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In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 26 day of October, 2005.

Respectfully submitted,



RICK D. NYDEGGER
Registration No. 28,651
JENS C. JENKINS
Registration No. 44,803

WORKMAN NYDEGGER
Attorneys for Applicant
Telephone: (801) 533-9800
Customer No. 047973

RDN:JCJ:ccn:ppa
PPA0000001460V001